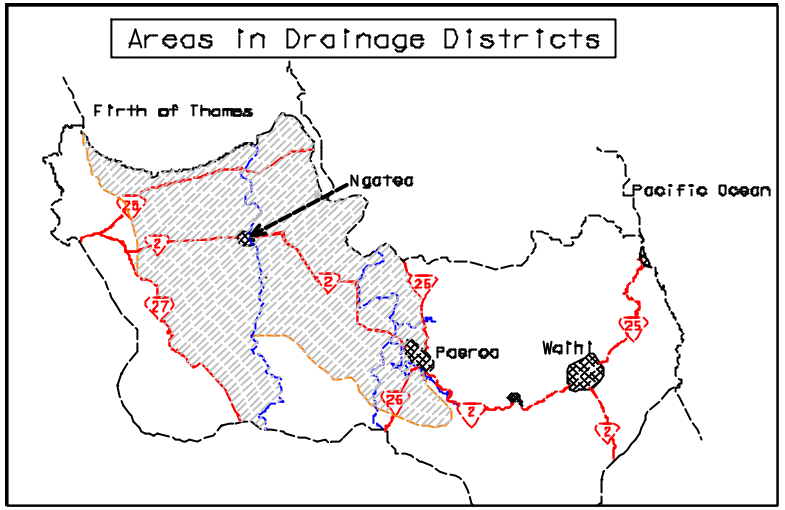
Land Drainage



HDC Land Drainage services

Hauraki District Council has defined land drainage areas which manage water run-off to achieve an agreed level of protection for the community and the environment. Hauraki District Council is responsible for the operation of these land drainage systems.

There are five land drainage districts being Western Plains, Eastern Plains, Komata North, Opukeko and Tirohia-Rotokohu. Council manages these drainage systems through the maintenance of drains, control structures, floodgates, flood pumps, culverts and stop-banks. There is also a 7 km foreshore stopbank system situated northwest of Waitakaruru to protect property from the adverse effects of tidal flooding. Each drainage district has its own sub-committee of members elected to represent ratepayers specifically on drainage matters in their area.

How does the community outcomes relate to Land Drainage?

Community Outcome	How Land Drainage contributes
Safe and Healthy Environment	• Ensures defined areas are provided with effective land drainage. • Ensures defined areas are provided with effective flood protection to the agreed standard.

Current Level of Service

The drainage committees report directly to the Works Committee of the Council to which the Hauraki District Council has delegated the responsibility for land drainage. The drainage committees establish levels of service with the Council and community and the works programmes for each year. Council then sets the rates to be collected on their behalf.

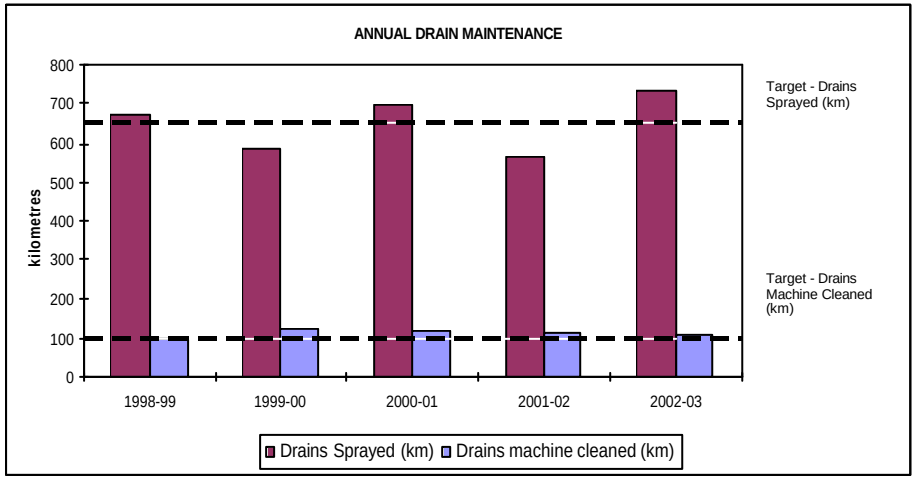
Council has 678 km of drains, 86 km of stopbanks, seven flood control structures, three siphon structures, 131 floodgates, five pump stations, and numerous access culverts and fences. Council has mobile flood pumps to dispose of ponding resulting from emergency situations such as storm events.

Maintenance of the drains is a preventative mechanism used by Council to optimise the performance of the drainage system to deliver water to the outlets at an agreed level of service. The Council maintains its drains through annual drain spray and machine cleaning programmes.

Environment Waikato

Given that most of the drainage and surface flooding is disposed of through Environment Waikato floodgates, drains and pump stations to the main river channels of the Piako and Waihou rivers, it is important that a close working relationship is maintained with Environment Waikato. The Council does this by appointing representatives of the Council drainage districts to the Environment Waikato Waihou Valley Scheme-Piako River Scheme Liaison sub-committee

There is also a close and co-operative relationship between the staff of both councils for the inspection and operation of floodgates and pump stations, particularly in emergency situations.



What will success look like?

Target	Measure
Operate a service requests/complaints database system to monitor service requests, and responses.	To respond to 95% of all complaints received about land drainage by the end of the next working day.
To maintain the network of drains at operational capacity through an annual maintenance programme.	To spray weeds on an average not less than 650kms of drain per year.
	To machine clean an average not less than 100kms of drain per year.

Planned Capital Work

- Floodgates will be replaced when their condition rating drops to poor.
- Pouarua-Maukoro southern stage capital works include provision of new pumps and drainage reorientation. This work will be undertaken in conjunction with Environment Waikato, and will be progressive as ground levels get lower.
- Three of the four control structures in the Eastern Plains Drainage District are in need of replacement. The low usage of these reduces the priority for this replacement.
- Improvements and renewals in stormwater systems at rural settlements have been programmed in the drainage district capital works.
- Stop-bank construction and reconstruction programme will extend a further 3-4 years.
- Three of Council's five rural pump stations were built in 2001. The other two had major overhauls in 2000 and 2003. No further major renewals are expected in the next 20 years.

Planned Capital Expenditure

Western Plains Drainage District	2004/05 ($)	2005/06 ($)	2006/07 ($)	2007/14 ($)
Ngatea Town Improvements	100,000	100,000	50,000	350,000
Pouarua/Maukoro Final Design/Documentation	100,000			
Pouarua/Maukoro Southern Area works	225,000	1,125,000	150,000	750,000
Foreshore SB		60,000		
Maukoro LB SB			100,000	
Karito Canal SB			60,000	
Waitak FG/overflow			95,000	
Smythes F/G			80,000	
Eastern Plains Drainage District				
Turua S/W	70,000	30,000	30,000	210,000
Kerepehi S/W	20,000	20,000	20,000	140,000

Signalling possible change in Levels of Service

- Improvements to chemical sprays, biological control of weeds and improved water quality due to changing farm effluent technologies are predicted to have a positive effect on the land drainage system.
- More drainage pumping may be needed in time to counteract the impact of rising sea level and will also be needed to counteract the lowering ground levels on the peat soils of the Hauraki Plains.
- Changes in land use, for example increased horticulture, could result in the need for increased drainage capacity.
- The rural town's stormwater systems may become a ward or district function rather than the responsibility of the land drainage committees.

Where do funds come from?

Drainage District	Drainage Rate		
	District Rate	Land Value	Area
Western Plains	15%	55%	45%
Eastern Plains	15%	85%	0%
Komata North	15%	85%	0%
Opukeko	15%	85%	0%
Tirohia-Rotokohu	15%	85%	0%
Total	15%	64%	21%

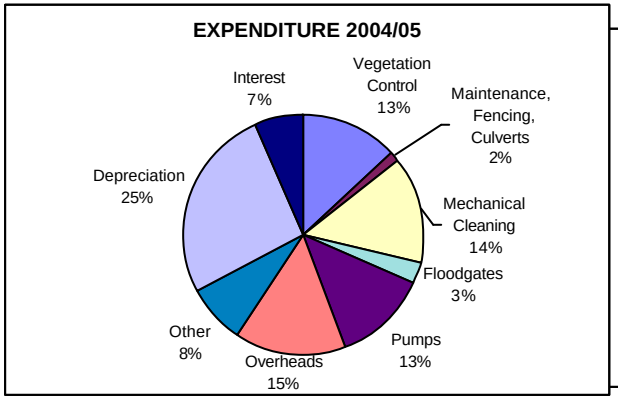
The parenthesis indicates future funding targets.

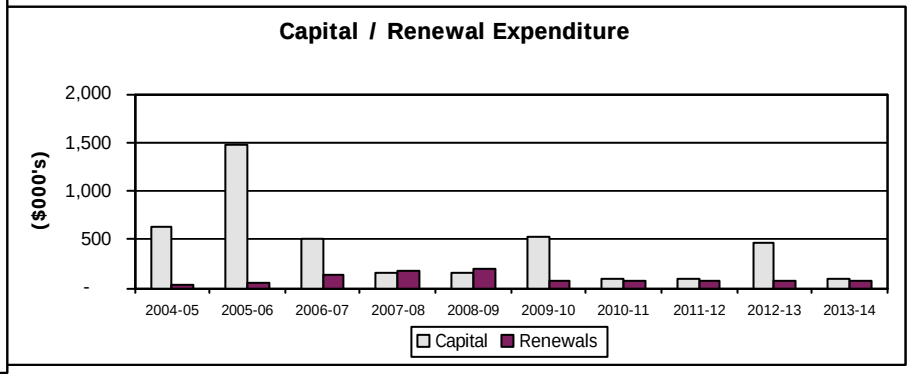
What are the significant negative effects of Land Drainage?

One result of land drainage of peat lands to allow productive farming is to decrease the level of the water table and encourage the vertical shrinkage of peat which results in the lowering of ground levels. This increases the need for pump stations.

What is the cost of operating the Land Drainage activity?

Forecast 2003-04 $000's		Forecast 2004-05 $000's	Projected 2005-06 $000's	Projected 2006-07 $000's	Projected 2007-08 $000's	Projected 2008-09 $000's	Projected 2009-10 $000's	Projected 2010-11 $000's	Projected 2011-12 $000's	Projected 2012-13 $000's	Projected 2013-14 $000's
	EXPENDITURE										
121	Vegetation Control	146	146	146	146	146	146	146	146	146	146
30	Maintenance/Fencing/Culverts	17	17	17	17	17	17	17	17	17	17
162	Mechanical Cleaning	160	155	151	151	151	151	151	151	151	151
38	Floodgates	33	33	33	33	33	33	33	33	33	33
134	Pumps	143	143	143	143	143	143	143	143	143	143
155	Overheads	166	166	163	163	166	163	163	165	163	163
82	Other	89	88	90	91	90	89	89	89	89	90
284	Depreciation	293	295	297	297	297	297	297	297	297	297
79	Interest	75	95	172	193	192	194	212	202	192	206
1,085	**Total Expenditure**	**1,122**	**1,138**	**1,212**	**1,234**	**1,235**	**1,233**	**1,251**	**1,243**	**1,231**	**1,246**
	LESS REVENUE										
(994)	Targeted Rates	(1,037)	(1,074)	(1,078)	(1,078)	(1,078)	(1,078)	(1,078)	(1,078)	(1,078)	(1,078)
(175)	General Rates	(183)	(190)	(190)	(190)	(190)	(190)	(190)	(190)	(190)	(190)
(84)	**NET COST OF SERVICE**	**(98)**	**(126)**	**(56)**	**(34)**	**(33)**	**(35)**	**(17)**	**(25)**	**(37)**	**(22)**





	Capital	**640**	**1,475**	**505**	**150**	**150**	**525**	**100**	**100**	**475**	**100**
	Renewals	**42**	**45**	**140**	**170**	**210**	**70**	**70**	**70**	**70**	**70**